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WARE LIND FURLOW ENGINEERS, INC.

GEOTECHNICAL AND BARTH SCIENCE CONSULTANTS

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April 20, 1992

Mississippi Office of Pollution Control Post Office Box 10385 Jackson, Mississippi 39289-0385

Report No. 92025

Attention: Mr. Steve Spangler

Groundwater Assessment
Enterprise Recovery Systems
Cayce, Mississippi

Gentlemen:

Submitted herein is the report of our groundwater assessment of the Enterprise Recovery Systems facility located in Cayce, Mississippi. This study was requested by the Mississippi Office of Pollution Control on December 23, 1991.

The scope of work for this investigation was outlined in our proposal dated February 3, 1992. Details of the investigation are provided in the body of this report.

We appreciate the opportunity of providing services to you on this project. If we can furnish any additional information or further assist you in any way, please call on us.

Very truly yours,

WARE LIND FURLOW ENGINEERS, INC.

Ronald J. Tarbutton, P. G.

Charles R. Furlow, P. E.

RJT/CRF/tls

Copies Submitted: (4)

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groundwater levels. Water used by WLFE during the field investigation phase of this study was obtained from fire hydrants from the cities of Byhalia, Mississippi and Collierville, Tennessee.

Relatively undisturbed samples of cohesive soils encountered in the soil borings were obtained by pushing a 3-in. OD thin-wall Shelby tube sampler a distance of approximately 2 ft into the soil using hydraulic cylinders on the drill rig (ASTM D 1587). The depths at which these samples were obtained are indicated by shaded portions in the "Samples" column of the boring logs. The undisturbed samples were removed from the Shelby tube in the field using a hydraulic extruder mounted on the drill rig. Each sample was extruded into an aluminum foil-lined sample catcher. The upper and lower 2 in. of soil samples were trimmed and discarded. In granular materials, representative soil samples will be obtained by driving a standard 2-in. OD split-spoon sampler a distance of 18 in. into the soil with a 140-1b hammer falling a distance of 30 in. The number of blows required to drive the sampler the final 12 in. of penetration was observed and recorded (ASTM D 1586). Representative portions of the soil samples were placed in glass jars for future reference. A representative portion of each sample was placed in a foil-covered glass jar for field screening analyses. The lithologic descriptions of the soil samples were made by a qualified geologist. Soil classification was performed in general agreement with ASTM Standard Test Methods D 2487 and D 2488. The soils were characterized by strength, plasticity, color and particle size. Each sample was identified by boring number, sample depth and sample number.

To prevent cross contamination between borings, the drilling and sampling equipment was decontaminated between samples and between boring locations. Equipment included in the decontamination process were soil samplers, augers and drill rods. The decontamination procedure consisted of cleaning the equipment with a steam cleaner and thoroughly washing with a non-phosphate detergent. The equipment was then rinsed with tap water, deionized water and double rinsed with pesticide grade isopropanol alcohol. The decontamination procedures for the soil sampling equipment consisted of thoroughly washing the equipment with a non-phosphate detergent and rinsing with tap water. The equipment was allowed to air-dry before utilization.

Field screening was used to determine if volatile organic compounds were present. Soil samples were allowed to equilibrate to ambient temperatures for a period of approximately 10 minutes. After the sample equilibrated to ambient

temperature, the headspace of the glass jar was sampled using a HNu photoionization detector (PID). The PID readings are presented in the right-hand column of the graphical boring logs. The instrument was periodically adjusted during the day to compensate for instrument drift and ambient concentrations of petroleum hydrocarbons in the air, if any.

A temporary benchmark with an assumed elevation of 100 ft NGVD was established at the corner of a sidewalk near the office building located on the site. Relative elevations of existing borings and groundwater levels were referenced to this temporary benchmark. The observed water levels for the borings are noted at the bottom right of the graphical logs. A table indicating the relative top of casing elevations, water levels and water elevations is shown on Plate 22. A potentiometric map of the groundwater surface was constructed from water level observations made on April 10, 1992. This potentiometric map is presented on Plate 23.

The field investigation also included the installation of seven groundwater monitoring wells. Five of these wells (MW-1 through MW-4 and MW-6) were installed to a total depth of 110 ft; and two wells (MW-7 and MW-8) were installed to at total depths of 77 ft and 76.5 ft, respectively. Monitor Well MW-5 was installed by E.F. Williams and Associates located in Memphis, Tennessee. The locations of the monitoring wells were selected by a representative of MDEQ. The general location of the monitor wells are shown on Plate 1. The monitor wells were installed to provide hydrological data and a means of groundwater sampling. Monitor well construction details are presented on Plates 24 through 30. Water well drillers logs were submitted to MDEQ Office of Land and Water Resources. Copies of the well drillers logs are presented on Plates 31 through 34.

The groundwater monitoring wells installed consist of 2-in. diameter Triloc Schedule 40 PVC as manufactured by Brainard-Kilman. The well screens are 10 ft in length and have No. 10 slot sizes. At two of the monitor well locations (MW-7 and MW-8), a portion of each screen was placed above the groundwater level to allow monitoring of phase product, if any. The screens were installed to provide at least 5 ft of well screen below the observed groundwater surface. After the well materials were installed in the borings, a silica sand was placed around the well screens. The filter sand extended approximately 3 ft above the top of the screens. A 2 ft thickness of bentonite pellets was placed in the annular space between the boring sidewall and riser pipe to provide a seal. The

pellets were wetted and allowed to hydrate for approximately one hour. A cement-bentonite grout was placed from the top of the bentonite seal to the surface. Above-ground metal shrouds with locking lids were installed over the monitor wells. The shrouds were installed in 4 ft by 4 ft concrete pads to prevent surface water from entering the annular space. At the existing monitor well, a flush mount was installed in a 4 ft by 4 ft concrete pad to prevent surface water from entering the annular space.

Boring B-4 was advanced using rotary wash drilling techniques to a terminal depth of 114 ft. Based on the information provided from the field screening analyses, a 6-in. diameter surface casing was installed to a terminal depth of 80 ft. Prior to installing the surface casing, the boring was enlarged to 10-in. in diameter and completely filled with a cement-bentonite grout mixture. The grout was placed into the boring from the bottom to the surface using the tremie method. Subsequent to grouting the boring, the 6-in. diameter surface casing was installed and advanced into the underlying soils using the hydraulics on the drill rig. The grout was allowed to harden for approximately 24 hours before advancing the boring. Prior to advancing the soil boring, the pump system on the drill rig was decontaminated by circulating a nonphosphate detergent for approximately 30 minutes. Drill fluids and soil cuttings were removed from the mud pit and the pit flushed with fresh water. Boring B-4 was then advanced to a terminal depth of approximately 114 ft.

The groundwater monitor wells were purged before taking samples in order to clear any stagnant water from the well casing. Approximately three well volumes of groundwater were removed from the monitor wells before the samples The groundwater samples were placed in 40-mil glass vials were taken. (volatiles). The water was placed in the containers taking care not to agitate the samples to limit the volatilization and amount of oxygen added. The head space of the samples bottles was eliminated by completely filling the bottles. The bottles were then placed upside down in a container with ice and kept at 4°C. The water samples were delivered to the Mississippi State Health Department (MSHD) laboratory located in Jackson, Mississippi for analytical testing. All groundwater samples were identified with a label. The information provide on the label consisted of the project name, project number, monitor well number, type of test to be performed and date collected. A chain-of-custody seal was placed across the lid of each sample bottle.

For this investigation, three types of sample blanks were used. The sample blanks included trip blanks, equipment rinseate blanks and a Collierville City water blank. The trip blanks were prepared at the laboratory by filling the appropriate containers with deionized water. The trip blanks were transported from the laboratory to the field and back to the laboratory in a manner identical to the handling procedures used for the soil and water samples. The trip blanks were subjected to the same analytical tests as the water samples. In order to verify the effective decontamination of the sampling equipment, an equipment rinseate sample was collected. The rinseate sample was obtained by pouring purged deionized water over the sampling equipment. The resultant rinseate solution was collected in a decontaminated pyrex dish and placed in the appropriate containers for subsequent laboratory analyses. The purged deionized water was obtained from the MSHD laboratory. The City of Collierville water sample was obtained by filling bottles from WLFE equipment used to transport water obtained from the Collierville Water System. All water samples were collected in 40 mm vials supplied by the MSHD laboratory.

A chain-of-custody/analyses request form accompanied all samples delivered to the analytical laboratory. The chain-of-custody forms document sample possession from the time the samples were collected until analysis, in accordance with Federal and State guidelines. To maintain a permanent document of sample possession, the chain-of-custody documentation contained the following information: name and address of the sampling location, sample number, date and time of collection and sample type. Other pertinent information included identification of the boring, well number, number of sample containers, parameters requested for analyses, signature of the person(s) involved in the chain-of-possession and inclusive dates of possession. A seal was placed across the lid of each water sample bottle taken at the facility and had the signature of the person collecting the sample and the date. Copies of the chain-of-custody/analyses request forms are presented in the Appendix. The samples were delivered to the MSHD laboratory for analysis.

GENERAL SOIL CONDITIONS AND HYDROGEOLOGY

Physiographically, the site is located in the north central hills physiographic province. The geologic units encountered at the site from the youngest to the oldest are the Holocene Age Alluvial Sediments associated with

the Nonconnah River and the Eocene Kosciusko Formation. A generalized soil profile illustrating the stratigraphic relationship of the formations is presented on Plate 35.

The sediments associated with the Nonconnah River alluvium vary from clays and silty clays to sandy clays. The alluvium ranges in thickness from a minimum of 12 ft at Boring 5 to a maximum of 17 ft at Boring 2.

The Kosciusko Formation is characterized by dense white, brown and red, very fine to coarse grained sands with some reworked clays. Based on available geologic literature, the Kosciusko Formation is approximately 100 ft thick beneath the facility. The potentiometric map of the groundwater surface presented on Plate 23 was constructed from water level observations made on April 10, 1992. This potentiometric map indicates the direction of shallow groundwater flow is to the west-northwest.

Based on the review of the geologic literature, the site of this investigation is within a recharge area for the Kosciusko Aquifer. A potentiometric surface map of the Kosciusko Aquifer in the study area (Gandl, 1982) indicates a general groundwater flow for that aquifer to the west. The Kosciusko Formation is directly recharged from rainfall and streams.

REPORT LIMITATIONS

The borings made for this report were located in the field based on the direction of MDEQ, MOPC. The boring logs shown in this report contain information related to the types of soil encountered at specific locations and times and show lines delineating the interface between these materials. The logs also contain our field representative's interpretation of conditions that are believed to exist in those depth intervals between the actual samples taken. Therefore, these boring logs contain both factual and interpretative information. It is not warranted that these logs are representative of subsurface conditions at other locations and times.

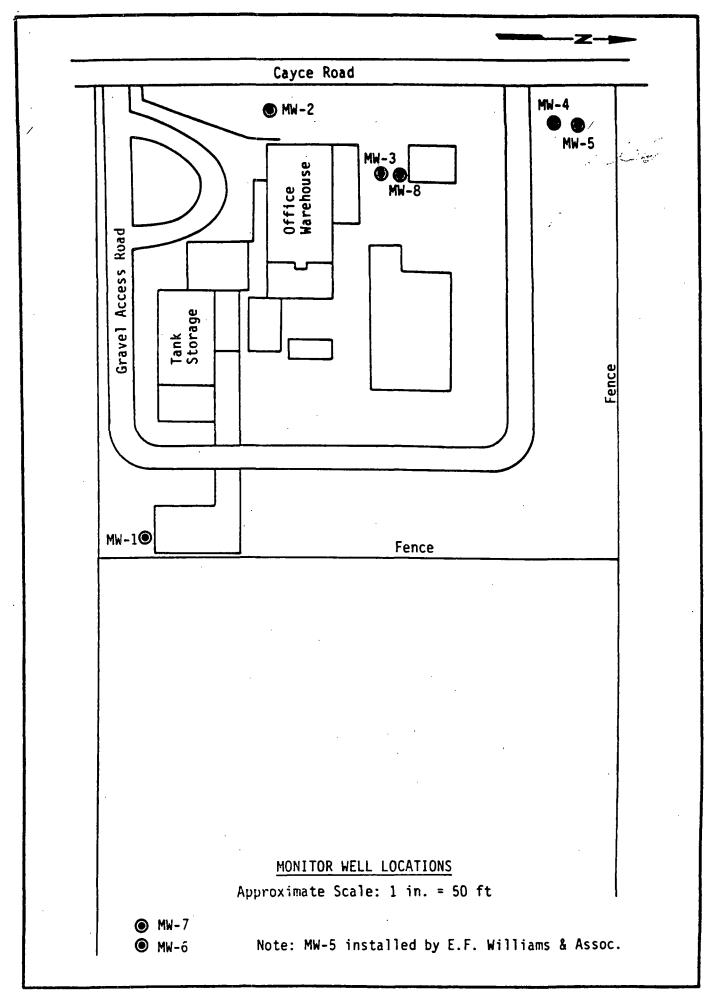
With regard to groundwater conditions, this report presents data on groundwater levels as they were observed during the course of the field work. In particular, water level observations have been accomplished at the times and under conditions stated in the text of the report and on illustrations contained in the report. It should be noted that fluctuations in the level of the

groundwater table will occur with passage of time due to variations in rainfall, temperature and other factors.

This report presents data concerning the presence of organic vapors as measured within the headspace of selected soil samples. These data are dependent upon ambient conditions and can be expected to fluctuate. Additionally, the presence of organic vapors can fluctuate over time.

This report has been prepared for the exclusive use of Mississippi Department of Environmental Quality for specific application to the environmental assessment of the Enterprise Recovery Systems site located near Cayce, Mississippi. The only warranty made by us in connection with the services provided is that we have used that degree of care and skill ordinarily exercised under similar conditions by reputable members of our profession practicing in the same or similar locality. No other warranty, expressed or implied, is made or intended.

ILLUSTRATIONS



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LOG OF BORING NO. 3 MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY MARSHALL COUNTY, MISSISSIPPI

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LOG OF BORING NO. 3 (Continued) COMESION, KIPS/SO FT UNCT DAY NETWIT BLONG PER FT Ē STE DESCRIPTION OF MATERIAL 26 II. MATER CONTENT, # LIMIT Ę Dense white and tan medium to coarse sand with occasional seams of light gray clay -105-100 18 -110--115--120--125-130 -135--150-COMPLETION DEPTH: 110.0 ft DEPTH TO MATER IN BORING: Not Determined DATE: 3/7/92

LOG OF BORING NO. 4 MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY MARSHALL COUNTY, MISSISSIPPI

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LOG OF BORING NO. 4 (Continued)

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LOG OF BORING NO. 4 (Continued) COMESION, KIPS/SO FT UNCT DAY RESOUT PLONS PER FT Ľ. Ē DESCRIPTION OF MATERIAL PLASTIC LIMIT NATER CONTENT, 3 LIMIN ė 40 Medium dense red and white very fine to fine sand (cont'd) -105--110-{ -115 -120 -125--130--135--140--145 -150-DEPTH TO MATER IN BORING: Not Determined COMPLETION DEPTH: 110.0 ft DATE: 3/9/92

LOG OF BORING NO. 5 MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY MARSHALL COUNTY, MISSISSIPPI

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LOG OF BORING NO. 6 MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY MARSHALL COUNTY, MISSISSIPPI

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LOG OF BORING NO. 7 MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY MARSHALL COUNTY, MISSISSIPPI

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SYMBOLS AND TERMS USED ON BORING LOGS

- SYMBOL DESCRIPTIONS -SOIL TYPES GROUNDWATER INFORMATION SAMPLER TYPES (SHOWN IN SYMBOL COLUMN) (SHOWN IN SYMBOL COLUMN) (SHOWN M SAMPLES COLUMN) AUGER Depth where groundwater was initially encountared SHELBY TUBE Water level in porung SPLIT SPOON approximetely IS minutes after initial encounter PISTON Water level in boring of least 10 hours after retary NO RECOVERY (PREDOMINANT TYPE SHOWN HEAVY)

-TERMS DESCRIBING CONSISTENCY OR CONDITION

COARSE GRAINED SOILS (more than 50% retained on No.200 sieve): Includes clean grovets and sands, and sity or clayey gravels and sands. Condition is rated occording to Standard Penetration Resistence. (ASTM DIS86)

DESCRIPTIVE TERM	STANDARD PENETRATION RESISTANCE (BLOWS/FT
Very Loose	0 to 4
Loose	5 to 9
Medium Dense	10 to 29
Dense	30 to 50
Very Dense	Above 50

FINE GRAINED SOILS (50% or more passes the No. 200 sieve): Includes (1) inorganic and organic sitts and clays, (2) gravely, sandy, or sitty clays, and (3) clayey sitts. Consistency is rated according to shegring strength as indicated by field or laboratory tests.

DESCRIPTIVE	TERM	UNDRAINED SHEAR STRENGTH (KIPS/SQ FT)

Very Soft Below 0.25 Soft 0.25 to 0.50 Firm 0.50 to 1.00 Stiff I.00 to 2.00 2.00 to 4.00 Very Stiff Hord Above 4.00

TERMS DESCRIBING SOIL STRUCTURE -

SLICKENSIDED - having fracture planes that appear polished and glossy

FISSURED - having definite planes of fracture with little resistance to fracturing

LAMINATED-composed of thin seams of varying color and texture

STRATIFIED - composed of alternating layers of varying material or color

CALCAREOUS-containing appreciable quantities of

calcium carbonate INDURATED - hardened by pressure or cementation

GLAUCONITIC - containing a green mineral commonly occurring in soils of marine origin

FRIABLE - easily crumbled

HOMOGENEOUS - having the same color and appearance throughout

WELL GRADED - having wide range in grain sizes and substantial amounts of all intermediate particle sizes

POORLY GRADED - predominantly of one grain size, or having a range of sizes with some intermediate size missing BLOCKY-having a structure that can be broken down into

small angular lumps which resist further breakdown ORGANIC - containing remains of living organisms

LAYER - a soil deposit with a thickness of about six inches SEAM - a bed of soil less than six inches thick deposited within another soil mass

PARTING - a very small thickness of sail within another soil

- NOTES -

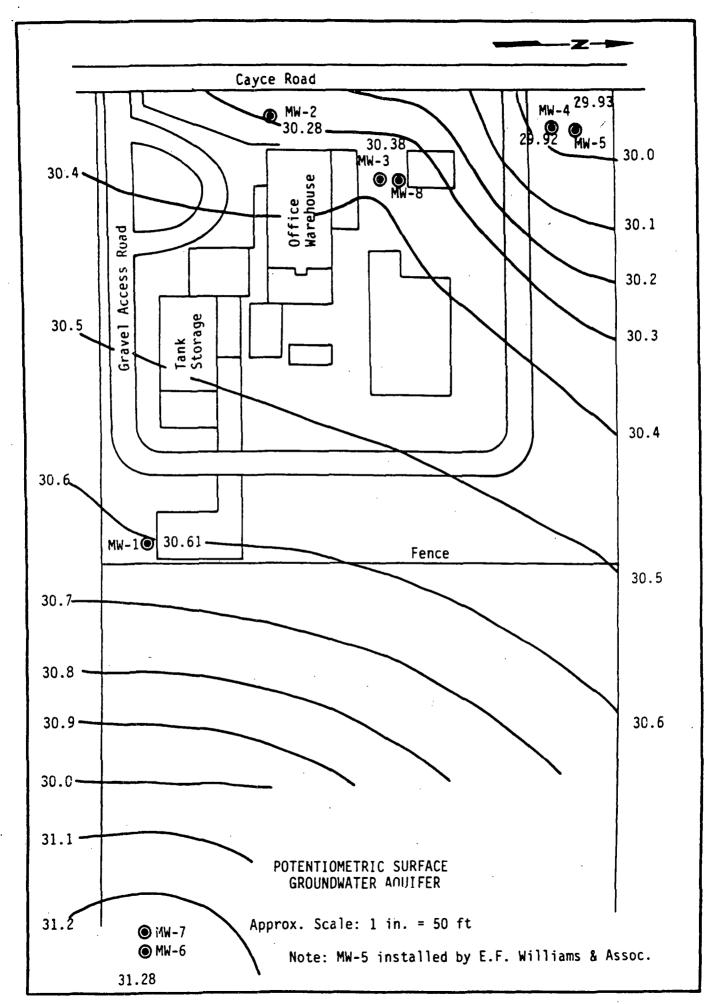
⁽¹⁾ Soil classification methods are in general agreement with ASTM Standard Test Methods D2487 and D2488. Wherever possible, classifications are based on laboratory test results. Where taboratory testing is insufficient to completely describe soil conditions, visual identifications are provided.

⁽²⁾ Groundwater information is presented when available. The presence of initial free water is masked in borings advanced by ratery wash methods. Drilling fluid levels indicated might not reflect static groundwater conditions. Groundwater level fluctuations with reinfall and other seasonal factors will occur.

Table of Elevations

Monitor Well		Water Level (4/10/92)	Water Elevation
1	102.70	71.71	30.61
2	102.37	72.09	30.28
3	101.38	71.00	30.38
4	99.52	69.60	29.92
5	97.82	67.89	29.93
· 6	103.04	71.76	31.28
7	103.81	*	
8	101.02	*	

^{*} MW-7 and MW-8 were developed and sampled on 4/10/92.



Project & Location Enterprise Recovery Services Facility Byhalia, Mississippi
Client Mississippi Department of Environmental QualityDate of Report 4/13/92
MW-1 Observation Well No. (B-1) Date Completed 3/4/92 Technician Tarbutton
Observation Well No. 18-11 Date Completed 3/4/92 Technician Threaded
Riser Pipe: Material PVC Diameter 2 in. Type of Joints Threaded
Corpan: Mararial PVC Siot Size UIU Diameter Z in Tanach IU to
Diameter of Borehole 6 in. Type of Filter Pack No. 3 Blasting Sand
Method of Placement of Filter Material <u> remie</u>
Type of Seal Above Screen Bentonite Pellets Backfill Above Seal Grout
Drilling Mud Yes used. Fresh Water Flush Before Setting Well Screen Yes
Well Developed by Air Lift Method Development Time 1 hrs
Groundwater Level @ 2 hrs @ 24 hrs Other 71.70 4/6/92

ELEV, MSL	FEATURE	GENERALIZED SOIL STRATIFICATION	
2.8	Top of Shroud		
2.5	Top of Riser Pipe		l t
			DEPTH,
	1197	Ground Surface	٥
		Ground Surface	
	1		
	9		1
95	Top of Seat Plug		
97	Top of Filter Sand		
	Top of Filter Sand		
100	Top of Screen	지도 [2] 사람이	
			}
110	Bottom of Screen		
110	Bottom of Plua / Cap		
114	Bassam of Bass Hale		
114	Bottom of Bore Hole	in the second second second second second second second second second second second second second second second	

Project & Location Enterprise Recovery Services Facility Byhalia, Mississippi
Client Mississippi Department of Environmental QualityDate of Report 4/13/92
MW-2 Observation Well No. (B-2) Date Completed 3/7/92 / Technician Tarbutton
Riser Pipe: Material PVC Diameter 2 in. Type of Joints Threaded
Screen: Material PVU Slot Size UIU Dismeter 4 in Lenoth 10 fr
Diameter of Borehole 6 in. Type of Filter Pack No. 3 Blasting Sand Method of Placement of Filter Material Iremie
Type of Seal Above Screen Bentonite Pellets Backfill Above Seal Grout
Drilling Mud Yes used. Fresh Water Flush Before Setting Well Screen Yes
Well Developed by Air Lift Method Development Time 1 hrs
Groundwater Level @ 2 hrs @ 24 hrs Other 72.09 4/6/92

ELEV, MSL DEPTH, FT	FEATURE	GENERALIZED SOIL STRATIFICATION	
2.8	Top of Shroud		
2.5	Top of Riser Pipe	7	FT

			DEPTH, FT
		Ground Surface	-
		Ground Surface	
95	Top of Seal Plug		
İ			
97	Top of Screen		
100	Top of Screen	[편] . 3]	
	<u> </u>		
110	Bottom of Screen		
110	Bottom of Plug / Cap		l
	Solitonia of Fide / Cap 11 12 12 12 12 12 12 1		i :
114	Bottom of Bore Hole		

Project & Location Enterprise Recovery Services Facility Byhalia, Mississippi
Client Mississippi Department of Environmental QualityDate of Report 4/13/92
MW-3 Observation Well No. (B-3) Date Completed 3/7/92 Technician Tarbutton
Riser Pipe: Material PVC Diameter 2 in. Type of Joints Threaded
Screen: Material PVC Slot Size 010 Diameter 2 in Length 10 fr
Diameter of Borehole 6 in. Type of Filter Pack No. 3 Blasting Sand
Method of Placement of Filter Material Tremie
Type of Seal Above Screen Bentonite Pellets Backfill Above Seal Grout
Drilling Mud Yes used. Fresh Water Flush Before Setting Well Screen Yes
Well Developed by Air Lift Method Development Time 1 hrs
Groundwater Level @ 2 hrs @ 24 hrs Other 70.98

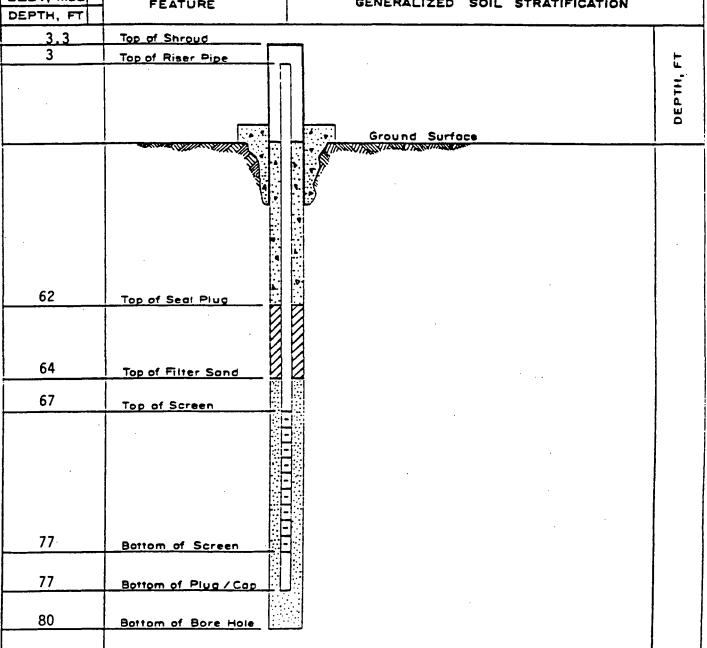
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2.5	Top of Riser Pipe					F
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33	Top of Seal Plug					
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97	Top of Filter Sand					
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	Bottom of Screen	싦				1
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110	Bottom of Plua / Cap	哥				
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114	Bottom of Bore Hole		•			1

	. Enternrise Rec	covery Services Facility Byhalia, Mississip	pi
Project & Lo	iccioni Department of F	Environmental QualityDate of Report 4/13/92	<u> </u>
Client Fil22	MW-4	Date of Report	
Observation	Well No. (B-4) Date	Completed 3/9/92 Technician Tarbutton	
Riser Pipe:	Material PVC	Diameter 2 in. Type of Joints Thread	ed
Screen: Ma	terial <u>PVC</u> Slot	Size .010 Diameter 2 in. Length 10	ft
		n. Type of Filter Pack No. 3 Blasting Sa	na
	lacement of Filter Mat		
		te Pellets Backfill Above Seal Grout	
Drilling Mu	d <u> </u>	sh Water Flush Before Setting Well Screen Yed Development Time 1	<u> </u>
	·	d Development Time1 @ 24 hrs Other 69.564/6/92	nr
Groundwater	Level & 7 his	Uther	
ELEV, MSL		CENERAL IZER CON CERTIFICATION	
DEPTH, FT	FEATURE	GENERALIZED SOIL STRATIFICATION	
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2.5	Top of Riser Pipe	¬	FI
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			DEPTH ,
	ार व	Ground Surface	٥
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95	Top of Seal Plug		
97	Top of Filter Sand		
100	Top of Priver Sand		
100	Top of Screen	-101 -104	
110	Bottom of Screen		
110	Bottom of Plua / Cap		
114	Bottom of Bore Hole		
			

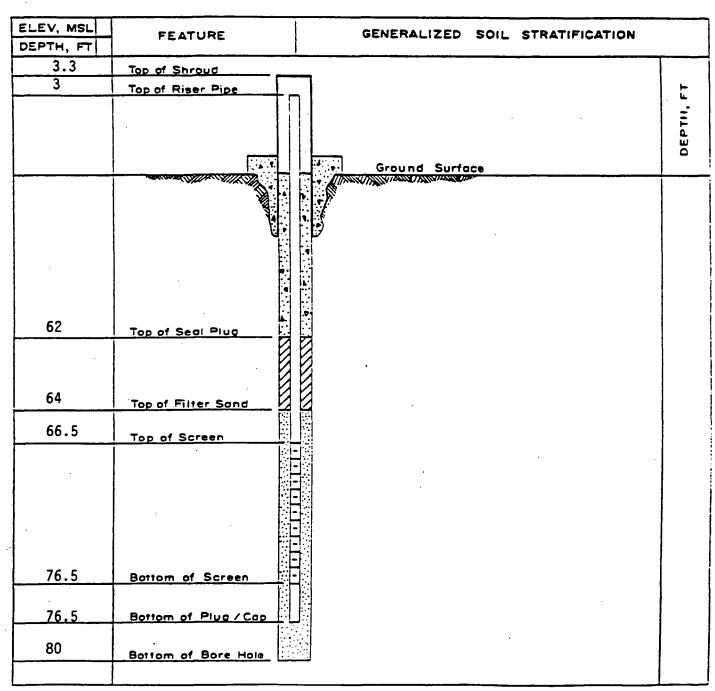
Project & Location Enterprise Recovery Services Facility Byhalia, Mississippi
Client Mississippi Department of Environmental QualityDate of Report 4/13/92
Observation Well No. (B-5) Date Completed 4/8/92 Technician Tarbutton Riser Pipe: Material PVC Diameter 2 in. Type of Joints Threaded Screen: Material PVC Slot Size .010 Diameter 2 in. Length 10 ft Diameter of Borehole 6 in. Type of Filter Pack No. 3 Blasting Sand
Method of Placement of Filter Material <u>Tremie</u> Type of Seal Above Screen <u>Bentonite Pellets</u> <u>Backfill Above Seal <u>Grout</u> Drilling Mud <u>Yes</u> used. Fresh Water Flush Before Setting Well Screen <u>Yes</u> Well Developed by <u>Air Lift Method</u> <u>Development Time</u> 1 hrs Groundwater Level @ 2 hrs @ 24 hrs Other71.76 4/10/92</u>

			
ELEV, MSL	FEATURE	GENERALIZED SOIL STRATIFICATION	
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		翻	
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		셺	
114	Bottom of Bore Hole		

•	LOC	OF GROUNDWATER OBSERVATION WELL	
Project & Lo	ocation Enterpri	se Recovery Services Facility Byhalia, Mis	ssissippi
Client Miss	<u>issippi Departmen</u>	t of Environmental QualityDate of Report 4/2	13/92
Riser Pipe: Screen: Man Diameter of Method of P: Type of Sea: Drilling Muc Well Develor	Material PVC terial PVC Borehole 6 lacement of Filte l Above Screen Be d Yes used. ped by Air Lift	Date Completed 4/9/92 Technician Tar Diameter 2 in. Type of Joints. Slot Size 010 Diameter 2 in. Length in. Type of Filter Pack No. 3 Blas er Material Tremie entonite Pellets Backfill Above Seal Grout Fresh Water Flush Before Setting Well Screen Method Development Time 1	Threaded 10 ft ting Sand 2 Yes 2 hrs
ELEV, MSL DEPTH, FT	FEATURE	GENERALIZED SOIL STRATIFICATI	ON
3.3	Top of Shroud		
3	Top of Riser Pipe		
			JH,



Project & Location Enterprise Recovery Services Faci	lity Byhalia, Mississippi
Client Mississippi Department of Environmental Qualit	Date of Report 4/13/92
MW-7 Observation Well No. (B-6) Date Completed 4/8/92 Riser Pipe: Material PVC Diameter 2 i Screen: Material PVC Slot Size 010 Diameter Diameter of Borehole 6 in. Type of Filt	Technician Tarbutton in. Type of Joints Threaded er 2 in. Length 10 ft
Method of Placement of Filter Material Tremie	
Type of Seal Above Screen Bentonite Pellets Backfr Drilling Mud Yes used. Fresh Water Flush Before Well Developed by Air Lift Method Developed by Developed	ore Setting Well Screen Yes
Groundwater Level @ 2 hrs @ 24 hrs	



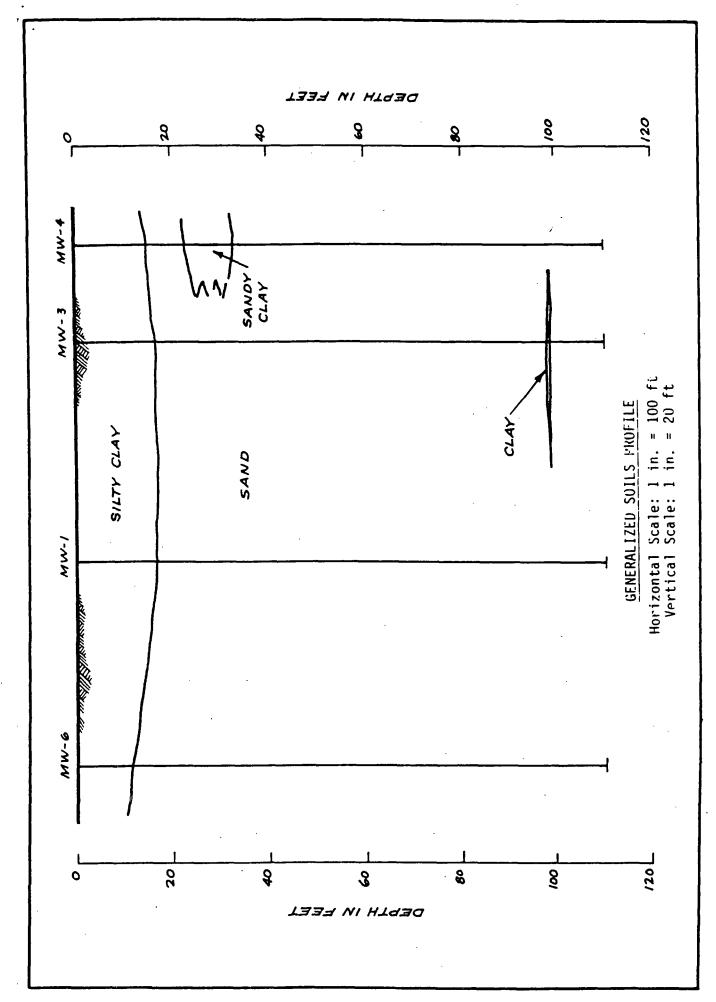
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If well telescopes please sketch and show depths.	
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GROUND LEVEL	
	/
	SECTION 27
	Please indicate well location X.
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	MW I is concerned with MDE
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TYPE OF COM	80				Name of Orga	nestion Aunning Log)						
Gravel Packed. Natural Develo (Describe)	Underr pment.	eamed. Open H	Telesc	oped. Other	GEOLOGIC DATA (Office Use Only) Surface Elav. Geologic Unit Unit Thickness Depth to Top								
Top of Lap Pipe			g	 -	Sum SMI	Date	Acabas	Actual	Total				
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PLATE 33

/	If well telescopes please sketch and show depths.	
_		
•	GROUND LEVEL	X
		SECTION 27 Please indicate well location X. ADDITIONAL INFORMATION MIN Silv artiflux to MIN 7 Completed to 76.5'. Mounter Welk were justilled in accidence with MINE hand our water 120 laticus
	if more than one screen, show location of each on sketc	n



APPENDIX

MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY

CHAIN OF CUSTODY RECORD

OFFICE OF POLLUTION CONTROL P. O. Box 10385 . Jackson, Mississippi 39289-0385 .

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CHAIN OF CUSTODY RECORD

MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY

OFFICE OF POLLUTION CON'ROL P. O. Box 10385 Jackson, Misslesippi 39289-0385

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POLLUTION CONTROL, P. O. Box 10385 Jackson, Mississippi 39289-0385 OFFICE OF

CHAIN OF CUSTODY RECORD

MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY

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List no. of
containers
submitted. RELINGUISHED PRINT REMARKS (SION) TOTAL CONTAINERS 4 とした Sumer 10 Ground して Vitte and Yellow copies accompany sample shipment to laboratory; Yellow copy relatived by laboratory White copy is instrated to sample in: Pherale STATION LOCATION/DESCRIPTION RECEIVED BY: . BON RABITHI RECEIVED BY: (PRINT) PROJECT LEADER . Noale 8 Le \sim 16Browk BLank 2 Lan BLaw BUL HILLER ce 11 1/14 DATEMBE INTAGENTY: COMP GRAB 1000 0101 143 W Brown 1000 TIME. PROJECT NAME/LOCATION 35 11/11 0/4 لسدادساناا 410 DATE **ESD SAMPLE TYPES** RELINQUISHED BY: SHOWN TO 1 POR RELINQUISHED BY: (PRNT) 7 <u>ে</u> d 6 C **CLIFFACE WATER** OISTRIBUTION: STATION NO. 0 7 - 67(0) 2-will عدر ، ۲۰ Mw-1 A-014 M10-3 2.1012 Jan L -177 inw -**MSD**